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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/589,881	06/09/2000	Jeongmin Moon	3430-0105P	1734

7590 03/08/2004

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EXAMINER

NGUYEN, HOAN C

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 03/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/589,881

Applicant(s)

MOON, JEONGMIN

Examiner

HOAN C. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-11,14-21,23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) 3,12,13 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-11,14-21,23 and 24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/17/03 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-4, 6-11 and 14-21, 23 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Shinji et al. (US6259854B1).

In regard to claims 1, 2 and 10, Shinji et al. (Figs. 1 a-15b) disclose

- an auxiliary light source device comprising: a light source 1;

- a light reflecting member (reflector 4) which guides light from the light source into the light directing member,
- a light directing member 3 for directing incident light from the light source toward the reflector, the light directing member including
 - a lower surface having a plurality of convex portions extending from the lower surface, each of the convex portions having a substantially planar surface which is substantially parallel to the lower surface, and an angle between the lower surface and a surface connecting the planar surface of the convex portion is about 90° since slope angle $\delta = 0^\circ$ or 2° (col. 7 lines 5-6).

wherein light reflected along an orthogonal direction L2/L3 to the liquid crystal display device is uniform (to emit primary light inputted from the side end plane of the light guide uniformly, in abstract and col. 1 lines 27-28) according to Figs. 5 ($\delta = 0^\circ$) or Fig. 6 ($\delta = 2^\circ$) or Fig. 7 ($\delta = 5^\circ$).

In regard to claims 21 and 24, Shinji et al. (Figs. 1 a-1 5b) disclose an auxiliary light source device comprising:

- a light source 1 extending along a width of the reflector to emit light along a length of the reflector 4;
- a light directing device 3 located above the reflector 4 and adjacent to the light source to direct light from the light source to the reflector such that a light distribution of light directed by the light directing device is substantially uniform

along the length of the reflector, and such that the directed light is substantially perpendicular to the reflector;

- the light-directing device 3 includes a plurality of portions extending toward the reflector at a 90° angle such that the light reflected along an orthogonal direction L2/L3 to the liquid crystal display device is uniform (to emit primary light inputted from the side end plane of the light guide uniformly, in abstract and col. 1 lines 27-28) according to Figs. 5 ($\delta = 0^\circ$) or Fig. 6 ($\delta = 2^\circ$) or Fig. 7 ($\delta = 5^\circ$), spacing between the portions decreasing along the length of the reflector with increasing distance from the light source.

In regard to claims 11 and 14, Shinji et al. (Figs. 1 a-15b) disclose an auxiliary light source device comprising :

- an upper reflective surface to reflect impinging light above a certain incidence angle; Example see in Fig. 2, upper reflective surface is 3c.
- a lower reflective surface 3a having a plurality of convex portions extending toward the reflector to direct light from the auxiliary light source device to the reflector;
- an entry surface facing to the light source 1 connecting the upper and lower reflective surfaces through which light from a light source enters,
 - each convex portion includes a planar portion and sides connecting the planar portion with the lower reflective surface, and an angle between the

lower surface and the sides is 90° since slope angle $\delta = 0^\circ$ or 2° (col. 7 lines 5-6).

- light reflected along an orthogonal direction L2/L3 to the liquid crystal display device is uniform (to emit primary light inputted from the side end plane of the light guide uniformly, in abstract and col. 1 lines 27-28) according to Figs. 5 ($\delta = 0^\circ$) or Fig. 6 ($\delta = 2^\circ$) or Fig. 7 ($\delta = 5^\circ$).
- a planar portion is substantially parallel to the lower reflective surface.

In regard to claims 3 and 19, Shinji et al. (Fig. 15b) disclose an auxiliary light source device, wherein spacing between the convex portions decreases with increasing distance from the light source (Fig. 15b).

In regard to claims 4, 20 and 23, Shinji et al. (Fig. 15a) disclose the spacing between adjacent convex portions of lower surface of the light-directing member is $100\mu\text{m}$ (Fig. 15a) that is in a range of $10\mu\text{m}$ to $1000\mu\text{m}$ and a width W of each portion is from $20\mu\text{m}$ to $200\mu\text{m}$ (abstract), which covers a width less than $100\mu\text{m}$.

In regard to claims 6 and 15, Shinji et al. (Fig. 1 b) disclose the planar surface of each convex portion has a cross-section of substantially circular shape (Fig. 1 b).

In regard to claims 7 and 16, Shinji et al. (Fig. 1f) disclose the planar surface of each convex portion has a cross section of rectangular shape (Fig. 1f),

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In regard to claims 8 and 17, Shinji et al. (Fig. 1 d or 1 g) disclose the plane surface of the plurality of convex portions has a bar shape extending perpendicular to a direction of light propagation in the light directing member 11 and along substantially an entire width of the reflective LCID device.

In regard to claim 9, Shinji et al. (Fig. 15b) disclose (Table 1) a distance/height between the lower surface and the planar surface of each convex portion is $12\mu\text{m}$ and $20\mu\text{m}$ that is less than $50\mu\text{m}$.

In regard to claim 18, Shinji et al. (Fig. 15b) disclose a plurality of convex portion extending from the lower surface to ensure an uniform distribution of light along a length of the device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOAN C. NGUYEN whose telephone number is (703) 306-0472. The examiner can normally be reached on MONDAY-THURSDAY:8:00AM-4:30PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0530.


TO ANTON
PRIMARY EXAMINER

HOAN C. NGUYEN
Examiner
Art Unit 2871